

## SEQUENCE LISTING

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<120> HUMANIZED IMMUNOGLOBULIN REACTIVE WITH B7-2 MOLECULES AND METHODS OF TREATMENT THEREWITH

<130> 08702.0081-00000

<140> 09/249,011

<141> 1999-02-12

<160> 52

<170> PatentIn version 3.1

<210> 1

<211> 405

<212> DNA

<213> Artificial Sequence

<220>

<221> CDS

<222> (1)..(405)

<223> Murine anti-B7-2 heavy chain

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atg ggt tgg aac tgt atc atc ttc ttt ctg gtt aca aca gct aca ggt	48
Met Gly Trp Asn Cys Ile Ile Phe Phe Leu Val Thr Thr Ala Thr Gly	
1 5 10 15	

gtg cac tcc cag gtc cag ctg cag cag tct ggg cct gag ctg gtg agg	96
Val His Ser Gln Val Gln Leu Gln Ser Gly Pro Glu Leu Val Arg	
20 25 30	

cct ggg gaa tca gtg aag att tcc tgc aag ggt tcc ggc tac aca ttc	144
Pro Gly Glu Ser Val Lys Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe	
35 40 45	

act gat tat gct ata cag tgg gtg aag cag agt cat gca aag agt cta	192
Thr Asp Tyr Ala Ile Gln Trp Val Lys Gln Ser His Ala Lys Ser Leu	
50 55 60	

gag tgg att gga gtt att aat att tac tat gat aat aca aac tac aac	240
Glu Trp Ile Gly Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn	
65 70 75 80	

cag aag ttt aag ggc aag gcc aca atg act gta gac aaa tcc tcc agc	288
Gln Lys Phe Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Ser Ser	
85 90 95	

aca gcc tat atg gaa ctt gcc aga ttg aca tct gag gat tct gcc atc	336
Thr Ala Tyr Met Glu Leu Ala Arg Leu Thr Ser Glu Asp Ser Ala Ile	
1	

## WYS00401\_Sequence\_Listing.txt

100

105

110

tat tac tgt gca aga gcg gcc tgg tat atg gac tac tgg ggt caa gga 384  
 Tyr Tyr Cys Ala Arg Ala Ala Trp Tyr Met Asp Tyr Trp Gly Gln Gly  
 115 120 125

acc tca gtc acc gtc tcc tca  
 Thr Ser Val Thr Val Ser Ser  
 130 135

405

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 <223> Murine anti-B7-2 heavy chain

<400> 2

Met Gly Trp Asn Cys Ile Ile Phe Phe Leu Val Thr Thr Ala Thr Gly  
 1 5 10 15

Val His Ser Gln Val Gln Leu Gln Ser Gly Pro Glu Leu Val Arg  
 20 25 30

Pro Gly Glu Ser Val Lys Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe  
 35 40 45

Thr Asp Tyr Ala Ile Gln Trp Val Lys Gln Ser His Ala Lys Ser Leu  
 50 55 60

Glu Trp Ile Gly Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn  
 65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Ser Ser  
 85 90 95

Thr Ala Tyr Met Glu Leu Ala Arg Leu Thr Ser Glu Asp Ser Ala Ile  
 100 105 110

Tyr Tyr Cys Ala Arg Ala Ala Trp Tyr Met Asp Tyr Trp Gly Gln Gly  
 115 120 125

Thr Ser Val Thr Val Ser Ser  
 130 135

<210> 3  
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 <212> DNA  
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## WYS00401\_Sequence\_Listing.txt

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<221> CDS
<222> (1)..(396)
<223> Murine anti-B7-2 light chain

<400> 3
atg gat tca cag gcc cag gtt ctt ata ttg ctg ctg cta tgg gta tct      48
Met Asp Ser Gln Ala Gln Val Leu Ile Leu Leu Leu Leu Trp Val Ser
1                               5                               10          15

ggt acc tgt ggg gac att gtg ctg tca cag tct cca tcc tcc ctg gct      96
Gly Thr Cys Gly Asp Ile Val Leu Ser Gln Ser Pro Ser Ser Leu Ala
                               20          25          30

gtg tca gca gga gag aag gtc act atg agc tgc aaa tcc agt cag agt     144
Val Ser Ala Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser
                               35          40          45

ctg ctc aac agt aga acc cga gag aac tac ttg gct tgg tac cag cag     192
Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu Ala Trp Tyr Gln Gln
                               50          55          60

aaa cca ggg cag tct cct aaa ctg ctg atc tac tgg gca tcc act agg     240
Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg
65                               70          75          80

gaa tct ggg gtc cct gat cgc ttc aca ggc agt gga tct ggg aca gat     288
Glu Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp
                               85          90          95

ttc act ctc acc atc agc agt gtg cag gct gaa gac ctg gca gtt tat     336
Phe Thr Leu Thr Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr
                               100          105          110

tac tgc acg caa tct tat aat ctt tac acg ttc gga ggg ggg acc aag     384
Tyr Cys Thr Gln Ser Tyr Asn Leu Tyr Thr Phe Gly Gly Gly Thr Lys
                               115          120          125

ctg gaa ata aaa
Leu Glu Ile Lys
130

<210> 4
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<213> Artificial Sequence

<220>
<223> Murine anti-B7-2 light chain

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Met Asp Ser Gln Ala Gln Val Leu Ile Leu Leu Leu Trp Val Ser
1                               5                               10          15

Gly Thr Cys Gly Asp Ile Val Leu Ser Gln Ser Pro Ser Ser Leu Ala
                               20          25          30

Val Ser Ala Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser
                               35          40          45

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## WYS00401\_Sequence\_Listing.txt

Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu Ala Trp Tyr Gln Gln  
50 55 60

Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg  
65 70 75 80

Glu Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp  
85 90 95

Phe Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr  
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Tyr Cys Thr Gln Ser Tyr Asn Leu Tyr Thr Phe Gly Gly Gly Thr Lys  
115 120 125

Leu Glu Ile Lys  
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<222> (1)..(405)  
<223> Humanized murine anti-human B7-2 heavy chain

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Met Gly Trp Asn Cys Ile Ile Phe Phe Leu Val Thr Thr Ala Thr Gly  
1 5 10 15  
gtg cac tcc cag gtc cag ctg gtg cag tct ggg gct gag gtg aag aag 96  
Val His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys  
20 25 30  
cct ggg agc tca gtg aag gtg tcc tgc aaa gct tcc ggc tac aca ttc 144  
Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe  
35 40 45  
act gat tat gct ata cag tgg gtg aga cag gct cct gga cag ggc ctc 192  
Thr Asp Tyr Ala Ile Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu  
50 55 60  
gag tgg att gga gtt att aat att tac tat gat aat aca aac tac aac 240  
Glu Trp Ile Gly Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn  
65 70 75 80  
cag aag ttt aag ggc aag gcc aca atg act gta gac aag tcg acg agc 288  
Gln Lys Phe Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Thr Ser  
85 90 95  
aca gcc tat atg gaa ctt agt tct ttg aga tct gag gat acg gcc gtt 336  
Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Thr Ala Val  
100 105 110

## WYS00401\_Sequence\_Listing.txt

tat tac tgt gca aga gcg gcc tgg tat atg gac tac tgg ggt caa ggt 384  
 Tyr Tyr Cys Ala Arg Ala Ala Trp Tyr Met Asp Tyr Trp Gly Gln Gly  
 115 120 125

acc ctt gtc acc gtc tcc tca 405  
 Thr Leu Val Thr Val Ser Ser  
 130 135

<210> 6  
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<220>  
 <223> Humanized murine anti-human B7-2 heavy ch

<400> 6

Met Gly Trp Asn Cys Ile Ile Phe Phe Leu Val Thr Thr Ala Thr Gly  
 1 5 10 15

Val His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys  
 20 25 30

Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe  
 35 40 45

Thr Asp Tyr Ala Ile Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu  
 50 55 60

Glu Trp Ile Gly Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn  
 65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Thr Ser  
 85 90 95

Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val  
 100 105 110

Tyr Tyr Cys Ala Arg Ala Ala Trp Tyr Met Asp Tyr Trp Gly Gln Gly  
 115 120 125

Thr Leu Val Thr Val Ser Ser  
 130 135

<210> 7  
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## WYS00401\_Sequence\_Listing.txt

&lt;222&gt; (1)..(396)

&lt;223&gt; Humanized murine anti-human B7-2 light chain

&lt;400&gt; 7

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Met	Asp	Ser	Gln	Ala	Gln	Val	Leu	Ile	Leu	Leu	Leu	Leu	Trp	Val	Ser	
1				5					10					15		

ggc	acc	tgt	ggg	gac	att	gtg	ctg	aca	cag	tct	cca	gat	tcc	ctg	gct	96
Gly	Thr	Cys	Gly	Asp	Ile	Val	Leu	Thr	Gln	Ser	Pro	Asp	Ser	Leu	Ala	
			20					25					30			

gta	agc	tta	gga	gag	agg	gcc	act	att	agc	tgc	aaa	tcc	agt	cag	agt	144
Val	Ser	Leu	Gly	Glu	Arg	Ala	Thr	Ile	Ser	Cys	Lys	Ser	Ser	Gln	Ser	
		35					40					45				

ctg	ctc	aac	agt	aga	acc	cga	gag	aac	tac	ttg	gct	tgg	tac	cag	cag	192
Leu	Leu	Asn	Ser	Arg	Thr	Arg	Glu	Asn	Tyr	Leu	Ala	Trp	Tyr	Gln	Gln	
		50				55				60						

aaa	cca	ggg	cag	cct	cct	aaa	ctg	ctg	atc	tac	tgg	gca	tcc	act	agg	240
Lys	Pro	Gly	Gln	Pro	Pro	Lys	Leu	Leu	Ile	Tyr	Trp	Ala	Ser	Thr	Arg	
65				70					75					80		

gaa	tct	ggg	gtc	cct	gat	cgc	ttc	agt	ggc	agt	gga	tct	ggg	aca	gat	288
Glu	Ser	Gly	Val	Pro	Asp	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	
				85					90					95		

ttc	act	ctc	acc	atc	agc	agt	ctg	cag	gct	gaa	gac	gtg	gca	gtt	tat	336
Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Ala	Glu	Asp	Val	Ala	Val	Tyr	
			100					105					110			

tac	tgc	acg	caa	tct	tat	aat	ctt	tac	acg	ttc	gga	cag	ggg	acc	aag	384
Tyr	Cys	Thr	Gln	Ser	Tyr	Asn	Leu	Tyr	Thr	Phe	Gly	Gln	Gly	Thr	Lys	
		115					120					125				

gtg	gaa	ata	aaa													396
Val	Glu	Ile	Lys													
				130												

&lt;210&gt; 8

&lt;211&gt; 132

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Humanized murine anti-human B7-2 light chain

&lt;400&gt; 8

Met	Asp	Ser	Gln	Ala	Gln	Val	Leu	Ile	Leu	Leu	Leu	Leu	Trp	Val	Ser	
1				5					10					15		

Gly	Thr	Cys	Gly	Asp	Ile	Val	Leu	Thr	Gln	Ser	Pro	Asp	Ser	Leu	Ala	
			20					25					30			

Val	Ser	Leu	Gly	Glu	Arg	Ala	Thr	Ile	Ser	Cys	Lys	Ser	Ser	Gln	Ser	
		35					40					45				

WYS00401\_Sequence\_Listing.txt

Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu Ala Trp Tyr Gln Gln  
50 55 60

Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg  
65 70 75 80

Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp  
85 90 95

Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr  
100 105 110

Tyr Cys Thr Gln Ser Tyr Asn Leu Tyr Thr Phe Gly Gln Gly Thr Lys  
115 120 125

Val Glu Ile Lys  
130

<210> 9  
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<212> DNA  
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<221> CDS  
<222> (1)..(15)  
<223> CDR1 of humanized murine anti-human B7-2 heavy chain

<400> 9  
gat tat gct ata cag  
Asp Tyr Ala Ile Gln  
1 5

15

<210> 10  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> CDR1 of humanized murine anti-human B7-2 heavy chain

<400> 10

Asp Tyr Ala Ile Gln  
1 5

<210> 11  
<211> 51  
<212> DNA  
<213> Artificial Sequence

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<223> CDR2 of humanized murine anti-human B7-2 heavy chain

WYS00401\_Sequence\_Listing.txt

<221> CDS  
<222> (1)..(51)

<400> 11  
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Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn Gln Lys Phe Lys  
1 5 10 15  
ggc 51  
Gly

<210> 12  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> CDR2 of humanized murine anti-human B7-2 heavy chain

<400> 12  
Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn Gln Lys Phe Lys  
1 5 10 15

Gly

<210> 13  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> CDR3 of humanized murine anti-human B7-2 heavy chain

<221> CDS  
<222> (1)..(21)

<400> 13  
gcg gcc tgg tat atg gac tac 21  
Ala Ala Trp Tyr Met Asp Tyr  
1 5

<210> 14  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> CDR3 of humanized murine anti-human B7-2 heavy chain

<400> 14  
Ala Ala Trp Tyr Met Asp Tyr  
1 5



WYS00401\_Sequence\_Listing.txt

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<210> 15
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> CDR1 of humanized murine anti-human B7-2 light chain

<221> CDS
<222> (1)..(51)

<400> 15
aaa tcc agt cag agt ctg ctc aac agt aga acc cga gag aac tac ttg      48
Lys Ser Ser Gln Ser Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu
1          5          10          15

gct                                     51
Ala

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<210> 16
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR1 of humanized murine anti-human B7-2 light chain

<400> 16
Lys Ser Ser Gln Ser Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu
1          5          10          15

Ala

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<210> 17
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> CDR2 of humanized murine anti-human B7-2 light chain

<221> CDS
<222> (1)..(21)

<400> 17
tgg gca tcc act agg gaa tct      21
Trp Ala Ser Thr Arg Glu Ser
1          5

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<210> 18
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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WYS00401\_Sequence\_Listing.txt

<400> 18

Trp Ala Ser Thr Arg Glu Ser  
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<210> 19

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> CDR3 of humanized murine anti-human B7-2 light chain

<221> CDS

<222> (1)..(24)

<400> 19

acg caa tct tat aat ctt tac acg  
Thr Gln Ser Tyr Asn Leu Tyr Thr  
1 5

24

<210> 20

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR3 of humanized murine anti-human B7-2 light chain

<400> 20

Thr Gln Ser Tyr Asn Leu Tyr Thr  
1 5

<210> 21

<211> 405

<212> DNA

<213> Artificial Sequence

<220>

<221> CDS

<222> (1)..(405)

<223> Anti-B7-2 heavy chain

<400> 21

atg ggt tgg aac tgt atc atc ttc ttt ctg gtt aca aca gct aca ggt 48  
Met Gly Trp Asn Cys Ile Ile Phe Phe Leu Val Thr Thr Ala Thr Gly  
1 5 10 15

gtg cac tcc cag gtc cag ctg cag cag tct ggg cct gag ctg gtg agg 96  
Val His Ser Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Arg  
20 25 30

cct ggg gaa tca gtg aag att tcc tgc aag ggt tcc ggc tac aca ttc 144  
Pro Gly Glu Ser Val Lys Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe  
35 40 45

act gat tat gct ata cag tgg gtg aag cag agt cat gca aag agt cta 192  
Page 10

## WYS00401\_Sequence\_Listing.txt

Thr Asp Tyr Ala Ile Gln Trp Val Lys Gln Ser His Ala Lys Ser Leu  
 50 55 60

gag tgg att gga gtt att aat att tac tat gat aat aca aac tac aac 240  
 Glu Trp Ile Gly Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn 80  
 65 70

cag aag ttt aag ggc aag gcc aca atg act gta gac aaa tcc tcc agc 288  
 Gln Lys Phe Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Ser Ser 95  
 85 90

aca gcc tat atg gaa ctt gcc aga ttg aca tct gag gat tct gcc atc 336  
 Thr Ala Tyr Met Glu Leu Ala Arg Leu Thr Ser Glu Asp Ser Ala Ile 110  
 100 105

tat tac tgt gca aga gcg gcc tgg tat atg gac tac tgg ggt caa gga 384  
 Tyr Tyr Cys Ala Arg Ala Ala Trp Tyr Met Asp Tyr Trp Gly Gln Gly 125  
 115 120

acc tca gtc acc gtc tcc tca 405  
 Thr Ser Val Thr Val Ser Ser 135  
 130 135

&lt;210&gt; 22

&lt;211&gt; 135

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Anti-B7-2 heavy chain

&lt;400&gt; 22

Met Gly Trp Asn Cys Ile Ile Phe Phe Leu Val Thr Thr Ala Thr Gly  
 1 5 10 15

Val His Ser Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Arg  
 20 25 30

Pro Gly Glu Ser Val Lys Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe  
 35 40 45

Thr Asp Tyr Ala Ile Gln Trp Val Lys Gln Ser His Ala Lys Ser Leu  
 50 55 60

Glu Trp Ile Gly Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn  
 65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Ser Ser  
 85 90 95

Thr Ala Tyr Met Glu Leu Ala Arg Leu Thr Ser Glu Asp Ser Ala Ile  
 100 105 110

Tyr Tyr Cys Ala Arg Ala Ala Trp Tyr Met Asp Tyr Trp Gly Gln Gly  
 115 120 125

Thr Ser Val Thr Val Ser Ser  
 130 135

&lt;210&gt; 23

## WYS00401\_Sequence\_Listing.txt

&lt;211&gt; 396

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(396)

&lt;223&gt; Anti-B7-2 light chain

&lt;400&gt; 23

atg	gat	tca	cag	gcc	cag	ggt	ctt	ata	ttg	ctg	ctg	cta	tgg	gta	tct	48
Met	Asp	Ser	Gln	Ala	Gln	Val	Leu	Ile	Leu	Leu	Leu	Leu	Trp	Val	Ser	
1				5					10					15		

ggt	acc	tgt	ggg	gac	att	gtg	ctg	tca	cag	tct	cca	tcc	tcc	ctg	gct	96
Gly	Thr	Cys	Gly	Asp	Ile	Val	Leu	Ser	Gln	Ser	Pro	Ser	Ser	Leu	Ala	
			20					25					30			

gtg	tca	gca	gga	gag	aag	gtc	act	atg	agc	tgc	aaa	tcc	agt	cag	agt	144
Val	Ser	Ala	Gly	Glu	Lys	Val	Thr	Met	Ser	Cys	Lys	Ser	Ser	Gln	Ser	
		35					40					45				

ctg	ctc	aac	agt	aga	acc	cga	gag	aac	tac	ttg	gct	tgg	tac	cag	cag	192
Leu	Leu	Asn	Ser	Arg	Thr	Arg	Glu	Asn	Tyr	Leu	Ala	Trp	Tyr	Gln	Gln	
		50				55					60					

aaa	cca	ggg	cag	tct	cct	aaa	ctg	ctg	atc	tac	tgg	gca	tcc	act	agg	240
Lys	Pro	Gly	Gln	Ser	Pro	Lys	Leu	Leu	Ile	Tyr	Trp	Ala	Ser	Thr	Arg	
65					70					75					80	

gaa	tct	ggg	gtc	cct	gat	cgc	ttc	aca	ggc	agt	gga	tct	ggg	aca	gat	288
Glu	Ser	Gly	Val	Pro	Asp	Arg	Phe	Thr	Gly	Ser	Gly	Ser	Gly	Thr	Asp	
				85					90					95		

ttc	act	ctc	acc	atc	agc	agt	gtg	cag	gct	gaa	gac	ctg	gca	gtt	tat	336
Phe	Thr	Leu	Thr	Ile	Ser	Ser	Val	Gln	Ala	Glu	Asp	Leu	Ala	Val	Tyr	
			100					105					110			

tac	tgc	acg	caa	tct	tat	aat	ctt	tac	acg	ttc	gga	ggg	ggg	acc	aag	384
Tyr	Cys	Thr	Gln	Ser	Tyr	Asn	Leu	Tyr	Thr	Phe	Gly	Gly	Gly	Thr	Lys	
			115				120					125				

ctg	gaa	ata	aaa													396
Leu	Glu	Ile	Lys													
			130													

&lt;210&gt; 24

&lt;211&gt; 132

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Anti-B7-2 light chain

&lt;400&gt; 24

Met	Asp	Ser	Gln	Ala	Gln	Val	Leu	Ile	Leu	Leu	Leu	Trp	Val	Ser	
1				5					10					15	

Gly	Thr	Cys	Gly	Asp	Ile	Val	Leu	Ser	Gln	Ser	Pro	Ser	Ser	Leu	Ala
			20					25					30		

val	Ser	Ala	Gly	Glu	Lys	Val	Thr	Met	Ser	Cys	Lys	Ser	Ser	Gln	Ser

## WYS00401\_Sequence\_Listing.txt

35

40

45

Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu Ala Trp Tyr Gln Gln  
 50 55 60

Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg  
 65 70 75 80

Glu Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp  
 85 90 95

Phe Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr  
 100 105 110

Tyr Cys Thr Gln Ser Tyr Asn Leu Tyr Thr Phe Gly Gly Gly Thr Lys  
 115 120 125

Leu Glu Ile Lys  
 130

&lt;210&gt; 25

&lt;211&gt; 405

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Humanized murine anti-human B7-2 heavy chain

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(405)

&lt;400&gt; 25

atg ggt tgg aac tgt atc atc ttc ttt ctg gtt acc aca gct aca ggt 48  
 Met Gly Trp Asn Cys Ile Ile Phe Phe Leu Val Thr Thr Ala Thr Gly  
 1 5 10 15

gtg cac tcc cag gtc cag ctg gtg cag tct ggg gct gag gtg aag aag 96  
 Val His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys  
 20 25 30

cct ggg agc tca gtg aag gtg tcc tgc aaa gct tcc ggc tac aca ttc 144  
 Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe  
 35 40 45

act gat tat gct ata cag tgg gtg aga cag gct cct gga cag ggc ctc 192  
 Thr Asp Tyr Ala Ile Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu  
 50 55 60

gag tgg att gga gtt att aat att tac tat gat aat aca aac tac aac 240  
 Glu Trp Ile Gly Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn  
 65 70 75 80

cag aag ttt aag ggc aag gcc aca atg act gta gac aag tcg acg agc 288  
 Gln Lys Phe Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Thr Ser  
 85 90 95

aca gcc tat atg gaa ctt agt tct ttg aga tct gag gat acg gcc gtt 336  
 Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val  
 100 105 110

tat tac tgt gca aga gcg gcc tgg tat atg gac tac tgg ggt caa ggt 384  
 Page 13

## WYS00401\_Sequence\_Listing.txt

Tyr Tyr Cys Ala Arg Ala Ala Trp Tyr Met Asp Tyr Trp Gly Gln Gly  
 115 120 125

acc ctt gtc acc gtc tcc tca  
 Thr Leu Val Thr Val Ser Ser  
 130 135

405

<210> 26  
 <211> 135  
 <212> PRT  
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<220>  
 <223> Humanized murine anti-human B7-2 heavy chain

<400> 26  
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 Val His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys  
 20 25 30  
 Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe  
 35 40 45  
 Thr Asp Tyr Ala Ile Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu  
 50 55 60  
 Glu Trp Ile Gly Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn  
 65 70 75 80  
 Gln Lys Phe Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Thr Ser  
 85 90 95  
 Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val  
 100 105 110  
 Tyr Tyr Cys Ala Arg Ala Ala Trp Tyr Met Asp Tyr Trp Gly Gln Gly  
 115 120 125  
 Thr Leu Val Thr Val Ser Ser  
 130 135

<210> 27  
 <211> 396  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Humanized murine anti-human B7-2 light chain

<220>  
 <221> CDS  
 <222> (1)..(396)

<400> 27  
 atg gat tca cag gcc cag gtt ctt ata ttg ctg ctg cta tgg gta tct 48  
 Met Asp Ser Gln Ala Gln Val Leu Ile Leu Leu Leu Trp Val Ser  
 1 5 10 15  
 ggc acc tgt ggg gac att gtg ctg aca cag tct cca gat tcc ctg gct 96  
 Page 14

## WYS00401\_Sequence\_Listing.txt

Gly Thr Cys Gly Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala  
 20 25 30  
 gta agc tta gga gag agg gcc act att agc tgc aaa tcc agt cag agt 144  
 Val Ser Leu Gly Glu Arg Ala Thr Ile Ser Cys Lys Ser Ser Gln Ser  
 35 40 45  
 ctg ctc aac agt aga acc cga gag aac tac ttg gct tgg tac cag cag 192  
 Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu Ala Trp Tyr Gln Gln  
 50 55 60  
 aaa cca ggg cag cct cct aaa ctg ctg atc tac tgg gca tcc act agg 240  
 Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg  
 65 70 75 80  
 gaa tct ggg gtc cct gat cgc ttc agt ggc agt gga tct ggg aca gat 288  
 Gly Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Thr Asp  
 85 90 95  
 ttc act ctc acc atc agc agt ctg cag gct gaa gac gtg gca gtt tat 336  
 Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr  
 100 105 110  
 tac tgc acg caa tct tat aat ctt tac acg ttc gga cag ggg acc aag 384  
 Tyr Cys Thr Gln Ser Tyr Asn Leu Tyr Thr Phe Gly Gln Gly Thr Lys  
 115 120 125  
 gtg gaa ata aaa  
 Val Glu Ile Lys 396  
 130

&lt;210&gt; 28

&lt;211&gt; 132

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Humanized murine anti-human B7-2 light chain

&lt;400&gt; 28

Met Asp Ser Gln Ala Gln Val Leu Ile Leu Leu Leu Trp Val Ser  
 1 5 10 15Gly Thr Cys Gly Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala  
 20 25 30Val Ser Leu Gly Glu Arg Ala Thr Ile Ser Cys Lys Ser Ser Gln Ser  
 35 40 45Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu Ala Trp Tyr Gln Gln  
 50 55 60Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg  
 65 70 75 80Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Thr Asp  
 85 90 95Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr  
 100 105 110Tyr Cys Thr Gln Ser Tyr Asn Leu Tyr Thr Phe Gly Gln Gly Thr Lys  
 Page 15

115

Val Glu Ile Lys  
130

<210> 29  
<211> 15  
<212> DNA  
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<223> CDR1 of humanized murine anti-human B7-2 heavy chain

<220>  
<221> CDS  
<222> (1)..(15)

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Asp Tyr Ala Ile Gln  
1 5

15

<210> 30  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> CDR1 of humanized murine anti-human B7-2 heavy chain

<400> 30  
Asp Tyr Ala Ile Gln  
1 5

<210> 31  
<211> 51  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> CDR2 of humanized murine anti-human B7-2 heavy chain

<220>  
<221> CDS  
<222> (1)..(51)

<400> 31  
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Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn Gln Lys Phe Lys  
1 5 10 15

ggc  
Gly

51

<210> 32  
<211> 17  
<212> PRT  
<213> Artificial Sequence



WYS00401\_Sequence\_Listing.txt

<220>

<223> CDR2 of humanized murine anti-human B7-2 heavy chain

<400> 32

Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn Gln Lys Phe Lys  
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Gly

<210> 33

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> CDR3 of humanized murine anti-human B7-2 heavy chain

<220>

<221> CDS

<222> (1)..(21)

<400> 33

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Ala Ala Trp Tyr Met Asp Tyr  
1 5

21

<210> 34

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR3 of humanized murine anti-human B7-2 heavy chain

<400> 34

Ala Ala Trp Tyr Met Asp Tyr  
1 5

<210> 35

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> CDR1 of humanized murine anti-human B7-2 light chain

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<221> CDS

<222> (1)..(51)

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Lys Ser Ser Gln Ser Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu  
1 5 10 15

48

gct

Ala

51

<210> 36

WYS00401\_Sequence\_Listing.txt

<211> 17  
 <212> PRT  
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<220>  
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 Lys Ser Ser Gln Ser Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu  
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Ala

<210> 37  
 <211> 21  
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<400> 37  
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 Trp Ala Ser Thr Arg Glu Ser  
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<210> 38  
 <211> 7  
 <212> PRT  
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<220>  
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<400> 38  
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<210> 39  
 <211> 24  
 <212> DNA  
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<220>  
 <221> CDS  
 <222> (1)..(24)

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## WYS00401\_Sequence\_Listing.txt

&lt;210&gt; 40

&lt;211&gt; 8

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; CDR3 of humanized murine anti-human B7-2 light chain

&lt;400&gt; 40

Thr Gln Ser Tyr Asn Leu Tyr Thr

1

5

&lt;210&gt; 41

&lt;211&gt; 1960

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; III2R Light Chain Variable Region

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (12)..(407)

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (768)..(1087)

&lt;400&gt; 41

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Met Asp Ser Gln Ala Gln Val Leu Ile Leu Leu Leu

1

5

10

tgg gta tct ggc acc tgt ggg gac att gtg ctg aca cag tct cca gat 98

Trp Val Ser Gly Thr Cys Gly Asp Ile Val Leu Thr Gln Ser Pro Asp

15

20

25

tcc ctg gct gta agc tta gga gag agg gcc act att agc tgc aaa tcc 146

Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Ser Cys Lys Ser

30

35

40

agt cag agt ctg ctc aac agt aga acc cga gag aac tac ttg gct tgg 194

Ser Gln Ser Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu Ala Trp

50

55

60

tac cag cag aaa cca ggg cag cct cct aaa ctg ctg atc tac tgg gca 242

Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala

65

70

75

tcc act agg gaa tct ggg gtc cct gat cgc ttc agt ggc agt gga tct 290

Ser Thr Arg Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser

80

85

90

ggg aca gat ttc act ctc acc atc agc agt ctg cag gct gaa gac gtg 338

Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Ala Glu Asp Val

95

100

105

gca gtt tat tac tgc agc caa tct tat aat ctt tac acg ttc gga cag 386

Ala Val Tyr Tyr Cys Ser Gln Ser Tyr Asn Leu Tyr Thr Phe Gly Gln

110

115

120

125

ggg acc aag gtg gaa ata aaa c gtaagtagtc ttctcaactc tagaaattct 438

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## WYS00401\_Sequence\_Listing.txt

Gly Thr Lys Val Glu Ile Lys  
130

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agaactttat taaggaatag ggggaagcta ggaagaaact caaaacatca agattttaaa 618  
tacgcttctt ggtctccttg ctataattat ctgggataag catgctgttt tctgtctgtc 678  
cctaactgc cctgtgatta tccgcaaaca acacacccaa gggcagaact ttgttactta 738  
aacaccatcc tgtttgcttc ttctctca gga act gtg gct gca cca tct gtc 790  
Arg Thr Val Ala Ala Pro Ser Val  
135 140

ttc atc ttc ccg cca tct gat gag cag ttg aaa tct gga act gcc tct 838  
Phe Ile Phe Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser  
145 150 155

ggt gtg tgc ctg ctg aat aac ttc tat ccc aga gag gcc aaa gta cag 886  
Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln  
160 165 170

tgg aag gtg gat aac gcc ctg caa tcg ggt aac tcc cag gag agt gtc 934  
Trp Lys Val Asp Asn Ala Leu Ser Gly Asn Ser Ser Glu Ser Val  
175 180 185

aca gag cag gac agc aag gac agc acc tac agc ctg agc agc acc ctg 982  
Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu  
190 195 200

acg ctg agc aaa gca gac tac gag aaa cac aaa gtc tac gcc tgc gaa 1030  
Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu  
205 210 215 220

gtc acc cat cag gcc ctg agc tcg ccc gtc aca aag agc ttc aac agg 1078  
Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg  
225 230 235

gga gag tgt tagagggaga agtgcccca cctgctcttc agttccagcc 1127  
Gly Glu Cys

tgaccccttc ccattctttg gcctctgacc ctttttccac aggggacctt cccctattgc 1187  
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tgttgaggga gaatgaataa ataaagtga tctttgcacc tgtggtttct ctctttcttc 1307  
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WY500401\_Sequence\_Listing.txt

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 atccacacta tactgtgaga ttaaaaaacat tcattaaaat gttgcaaagg ttctataaag 1907  
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<220>  
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 20 25 30  
 Val Ser Leu Gly Glu Arg Ala Thr Ile Ser Cys Lys Ser Ser Gln Ser  
 35 40 45  
 Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu Ala Trp Tyr Gln Gln  
 50 55 60  
 Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg  
 65 70 75 80  
 Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp  
 85 90 95  
 Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr  
 100 105 110  
 Tyr Cys Ser Gln Ser Tyr Asn Leu Tyr Thr Phe Gly Gln Gly Thr Lys  
 115 120 125  
 Val Glu Ile Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro  
 130 135 140  
 Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu  
 145 150 155 160  
 Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp  
 165 170 175  
 Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp  
 180 185 190  
 Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys  
 195 200 205  
 Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln  
 210 215 220

WYS00401\_Sequence\_Listing.txt

Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys  
225 230 235

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<212> DNA  
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<220>  
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<222> (1494)..(1821)

<220>  
<221> CDS  
<222> (1918)..(2238)

<400> 43  
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gct aca ggt gtg cac tcc cag gtc cag ctg gtg cag tct ggg gct gag 98  
Ala Thr Gly Val His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu  
15 20 25  
gtg aag aag cct ggg agc tca gtg aag gtg tcc tgc aaa gct tcc ggc 146  
Val Lys Lys Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly  
30 35 40 45  
tac aca ttc act gat tat gct ata cag tgg gtg aga cag gct cct gga 194  
Tyr Thr Phe Thr Asp Tyr Ala Ile Gln Trp Val Arg Gln Ala Pro Gly  
50 55 60  
cag ggc ctc gag tgg att gga gtt att aat att tac tat gat aat aca 242  
Gln Gly Leu Glu Trp Ile Gly Val Ile Asn Ile Tyr Tyr Asp Asn Thr  
65 70 75  
aac tac aac cag aag ttt aag ggc aag gcc aca atg act gta gac aag 290  
Asn Tyr Asn Gln Lys Phe Lys Gly Lys Ala Thr Met Thr Val Asp Lys  
80 85 90  
tcg acg agc aca gcc tat atg gaa ctt agt tct ttg aga tct gag gat 338  
Ser Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp  
95 100 105

## WYS00401\_Sequence\_Listing.txt

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 Thr Ala Val Tyr Tyr Cys Ala Arg Ala Ala Trp Tyr Met Asp Tyr Trp  
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 Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
 130 135  
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 cctggacctt cgtggataga caagaaccga ggggcctctg cgccctgggc ccagctctgt 617  
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 Ala Ser Thr Lys Gly Pro  
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 tgc gtc ttc ccc ctg gcg ccc tgc tcc agg agc acc tcc gag agc aca 719  
 Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr  
 145 150 155  
 gcg gcc ctg ggc tgc ctg gtc aag gac tac ttc ccc gaa ccg gtg acg 767  
 Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr  
 160 165 170  
 gtg tgc tgg aac tca ggc gct ctg acc agc ggc gtg cac acc ttc cca 815  
 Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro  
 175 180 185  
 gct gtc cta cag tcc tca gga ctc tac tcc ctc agc agc gtg gtg acc 863  
 Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr  
 190 195 200 205  
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 Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp  
 210 215 220  
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 His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr Val  
 225 230  
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 Glu Arg Lys Cys Cys Val Glu Cys Pro Pro  
 235 240  
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 Cys Pro  
 245  
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## WYS00401\_Sequence\_Listing.txt

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Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	
260					265					270					275	
gtg	gtg	gtg	gac	gtg	agc	cac	gaa	gac	ccc	gag	gtc	cag	ttc	aac	tgg	1631
Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Gln	Phe	Asn	Trp	
				280					285					290		
tac	gtg	gac	ggc	gtg	gtg	cat	aat	gcc	aag	aca	aag	cca	cgg	gag		1679
Tyr	Val	Asp	Gly	Glu	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	
			295					300				305				
gag	cag	ttc	aac	agc	acg	ttc	cgt	gtg	gtc	agc	gtc	ctc	acc	gtt	gtg	1727
Glu	Gln	Phe	Asn	Ser	Thr	Phe	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Val	
		310					315					320				
cac	cag	gac	tgg	ctg	aac	ggc	aag	gag	tac	aag	tgc	aag	gtc	tcc	aac	1775
His	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn		
		325			330					335						
aaa	ggc	ctc	cca	gcc	ccc	atc	gag	aaa	acc	atc	tcc	aaa	acc	aaa	g	1821
Lys	Gly	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Thr	Lys		
340					345					350						
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ctgggagtga	ccgctgtgcc	aacctctgtc	cctaca	ggg	cag	ccc	cga	gaa	cca							1935
				Gly	Gln	Pro	Arg	Glu	Pro	360						
				355												
cag	gtg	tac	acc	ctg	ccc	cca	tcc	cgg	gag	gag	atg	acc	aag	aac	cag	1983
Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Glu	Glu	Met	Thr	Lys	Asn	Gln	
				365					370					375		
gtc	agc	ctg	acc	tgc	ctg	gtc	aaa	ggc	ttc	tac	ccc	agc	gac	atc	gcc	2031
Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	
				380				385					390			
gtg	gag	tgg	gag	agc	aat	ggg	cag	ccg	gag	aac	aac	tac	aag	acc	aca	2079
Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	
		395					400					405				
cct	ccc	atg	ctg	gac	tcc	gac	ggc	tcc	ttc	ttc	ctc	tac	agc	aag	ctc	2127
Pro	Pro	Met	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	
						415					420					
acc	gtg	gac	aag	agc	agg	tgg	cag	cag	ggg	aac	gtc	ttc	tca	tgc	tcc	2175
Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	
425					430					435					440	
gtg	atg	cat	gag	gct	ctg	cac	aac	cac	tac	acg	cag	aag	agc	ctc	tcc	2223
Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	
				445					450					455		
ctg	tcc	ccg	ggt	aaa	tgagtgaatt	c										2249
Leu	Ser	Pro	Gly	Lys												
			460													



WYS00401\_Sequence\_Listing.txt

<210> 44  
 <211> 461  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> III2R Heavy Chain Variable Region

<400> 44  
 Met Gly Trp Asn Cys Ile Ile Phe Phe Leu Val Thr Thr Ala Thr Gly  
 1 5 10 15  
 Val His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys  
 20 25 30  
 Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe  
 35 40 45  
 Thr Asp Tyr Ala Ile Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu  
 50 55 60  
 Glu Trp Ile Gly Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn  
 65 70 75 80  
 Gln Lys Phe Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Thr Ser  
 85 90 95  
 Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val  
 100 105 110  
 Tyr Tyr Cys Ala Arg Ala Ala Trp Tyr Met Asp Tyr Trp Gly Gln Gly  
 115 120 125  
 Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe  
 130 135 140  
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu  
 145 150 155 160  
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp  
 165 170 175  
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu  
 180 185 190  
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser  
 195 200 205  
 Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp His Lys Pro  
 210 215 220  
 Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg Lys Cys Cys Val Glu  
 225 230 235 240  
 Cys Pro Pro Cys Pro Ala Pro Pro Ala Ala Ala Pro Ser Val Phe Leu  
 245 250 255  
 Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu  
 260 265 270  
 Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln  
 275 280 285

WYS00401\_Sequence\_Listing.txt

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys  
290 295 300

Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu  
305 310 315 320

Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys  
325 330 335

Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys  
340 345 350

Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser  
355 360 365

Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys  
370 375 380

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln  
385 390 395 400

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser Asp Gly  
405 410 415

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln  
420 425 430

Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn  
435 440 445

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys  
450 455 460

<210> 45  
<211> 327  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> III2R Variable Light Chain

<400> 45  
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60  
atcacttgcc gggcgagtc gggcattagc aattatttag cctggtatca gcagaaacca 120  
gggaaagtgc ctaagctcct gatctatgct gcatccactt tgcaatcagg ggtcccatct 180  
cggttcagtg gcagtggtgc tgggacagat ttactctca ccatcagcag cctgcagcct 240  
gaagatgttg caacttatta ctgtcaaaag tataacagtg cccctccgag tacgttcggc 300  
caagggaacca aggtggaaat caaacgt 327

<210> 46  
<211> 339  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> H2F Variable Light Chain

# WYS00401\_Sequence\_Listing.txt

```
<400> 46
gacatccagt tgacccagtc tccagactcc ctggctgtgt ctctgggcca gagggccacc 60
atcaactgca agtcagacca gagtgtttta tacagctcca acaacaagaa ttacttaact 120
tggtaccagc agaaccagg acagcctcct aagctgctca ttactgggc atctaccgg 180
gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240
atcagcagcc tgcaggctga agatgtggca gtttattact gtcagcaata ttatagtact 300
cctcgaacgt tcggccaagg gaccaagggtg gaaatcaaa 339
```

```
<210> 47
<211> 95
<212> PRT
<213> Artificial Sequence
```

```
<220>
<223> III2R Variable Light Chain
```

```
<400> 47
```

```
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15
```

```
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Asn Tyr
20 25 30
```

```
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Val Pro Lys Leu Leu Ile
35 40 45
```

```
Tyr Ala Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60
```

```
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80
```

```
Glu Asp Val Ala Thr Tyr Tyr Cys Gln Lys Tyr Asn Ser Ala Pro
85 90 95
```

```
<210> 48
<211> 101
<212> PRT
<213> Artificial Sequence
```

```
<220>
<223> H2F Variable Light Chain
```

```
<400> 48
```

```
Asp Ile Gln Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1 5 10 15
```

WYS00401\_Sequence\_Listing.txt

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser  
20 25 30

Ser Asn Asn Lys Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln Pro  
35 40 45

Pro Lys Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val  
50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr  
65 70 75 80

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln  
85 90 95

Tyr Tyr Ser Thr Pro  
100

<210> 49  
<211> 368  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> III2R Variable Heavy Chain

<400> 49  
aggtgcagct ggtgcagtct ggggctgagg tgaagaagcc tgggtcctcg gtaaaggctct 60  
cctgcaaggc ttctggaggc accttcagta gttatactat cagctgggtg cgacaggccc 120  
ctggacaagg gcttgagtgg atgggaagga tcatgcctat ccttgacta gcaaattacg 180  
cacagaagtt ccagggcaga gtcacgatta ccgcggacaa atccacgagc acagcctaca 240  
tggagctgag cagcctgaga tctgaggaca cgccctgtga ttactgtgag agagatccc 300  
attatgtttg ggggagcgac aactgggtcg accctgggg ccaggggaacc ctgctcatcg 360  
tctcctca 368

<210> 50  
<211> 358  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> H2F Variable Heavy Chain

<400> 50  
gtgcagctgg tggagtctgg gggaggcttg gtcaagcctg gagggctcct gagactctcc 60  
tgtgcagcct cggattcacc ttactagga atcctacgag ctgggtacgc caggctccag 120  
ggaaggggct ggagtgggtg gttaatataa tggtagctcg aattgaacca tactatgagg 180

WYS00401\_Sequence\_Listing.txt

actctgtgaa gggccgattc accatctcca gaggaacgc caagaactca ctgtatctgc 240  
 aaatgaacag cctgagagcc gaggacacgg ccgtgtatta ctgtgcgaga gggatctgtc 300  
 ttatgacaga ggctactttg actactgggg ccaggggaacc ctggtcaccg tctctca 358

<210> 51  
 <211> 97  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> III2R Variable Heavy Chain

<400> 51

Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser Ser  
 1 5 10 15

Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr Thr  
 20 25 30

Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met Gly  
 35 40 45

Arg Ile Met Pro Ile Leu Gly Leu Ala Asn Tyr Ala Gln Lys Phe Gln  
 50 55 60

Gly Arg Val Thr Ile Thr Ala Asp Lys Ser Thr Ser Thr Ala Tyr Met  
 65 70 75 80

Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala  
 85 90 95

Arg

<210> 52  
 <211> 98  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> H2F Variable Heavy Chain

<400> 52

Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser  
 1 5 10 15

Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr Tyr  
 20 25 30

WYS00401\_Sequence\_Listing.txt

Met Ser Trp Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser  
35 40 45

Tyr Ile Ser Ser Arg Gly Ser Glu Thr Ile Tyr Tyr Ala Asp Ser Val  
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr  
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys  
85 90 95

Ala Arg